



Victorian Certificate of Education 2011

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STUDENT NUMBER

Letter

Figures

Words

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PSYCHOLOGY

Written examination 2

Monday 7 November 2011

Reading time: 3.00 pm to 3.15 pm (15 minutes)

Writing time: 3.15 pm to 4.45 pm (1 hour 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

Section	Number of questions	Number of questions to be answered	Number of marks
A	45	45	45
B	12	10	35
C	1	1	10
			Total 90

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 27 pages.
- Answer sheet for multiple-choice questions.
- Additional space is available at the end of the book if you need extra paper to complete an answer.

Instructions

- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- All written responses must be in English.

At the end of the examination

- Place the answer sheet for multiple-choice questions inside the front cover of this book.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

SECTION A – Multiple-choice questions**Instructions for Section A**

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1, an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

Question 1

Sam is a healthy young boy who was involved in a car accident when he was three years old. In the accident, he sustained a head injury in which his hippocampi were damaged.

Since the accident, Sam is likely to have difficulty learning

- A. to bowl a ball.
- B. to knit for the first time.
- C. the names of people he meets.
- D. to ride a bike without training wheels.

Question 2

The neural development of newborn babies typically involves

- A. no neural plasticity.
- B. creation of new muscles.
- C. creation of neural pathways.
- D. a decrease in the number of neural pathways.

NO WRITING ALLOWED IN THIS AREA

Use the following information to answer Questions 3–5.

Meredith was born into an English-speaking family and acquired the English language in the usual way. No other languages were spoken in the home. When Meredith started high school, she studied Italian as a second language.

Question 3

In terms of the timing of experiences for learning and brain development, Meredith learning to speak English as her first language and then Italian as a second language at high school

- A. both reflect experience-expectant learning to the same degree.
- B. both reflect experience-dependent learning to the same degree.
- C. reflect experience-dependent and experience-expectant learning, respectively.
- D. reflect experience-expectant and experience-dependent learning, respectively.

Question 4

In terms of brain plasticity, it is likely that Meredith's developmental plasticity will

- A. increase with age.
- B. diminish with age.
- C. remain constant over her life span.
- D. enable her to acquire any language she is exposed to across her life span.

Question 5

Provided that Meredith remains healthy, it is likely that her capacity for adaptive plasticity will

- A. be maintained.
- B. increase with age.
- C. decrease with age.
- D. prevent her from acquiring new skills she attempts to learn across her life span.

Use the following information to answer Questions 6 and 7.

When she began her new job in a café, Lola had to learn how to use the coffee machine. To teach Lola, her employer at the café asked her to watch him as he made coffee with the machine.

Question 6

This type of learning is known as

- A. latent learning.
- B. insight learning.
- C. operant conditioning.
- D. observational learning.

Question 7

Later when she attempted to make a coffee by herself, Lola was unable to do so and had to ask her employer to show her the procedure again.

This is most likely because Lola

- A. lacked the maturation to make coffee.
- B. needed graduated exposure to coffee making.
- C. did not form a mental representation of what she had to do.
- D. did not use trial-and-error in learning how to make coffee using the machine.

Question 8

In his 1961 Bobo doll experiment, Bandura used three groups of participants, each comprising 24 children. Each group was assigned to one of three conditions.

Condition 1: shown an aggressive model

Condition 2: shown a passive model

Condition 3: no model

The results indicated that

- A. learning can occur in the absence of direct consequences for the learner.
- B. learning cannot happen without reinforcers for the model or the learner.
- C. boys and girls learnt to control their aggression through watching a model.
- D. learning can only occur when there are direct consequences for the learner.

Use the following information to answer Questions 9 and 10.

The following table sets out the conditions of a study for two different groups of rats in a maze, and the results of the study.

Group	Condition	Result
1	Rats run a maze each day for twelve days and are rewarded with food for reaching the end of the maze.	Rats learn the layout of the maze over successive days, making fewer errors each day.
2	Rats explore the maze randomly for ten days without reward, but are rewarded on the eleventh day for reaching the end of the maze.	Performance on the twelfth day equals the twelfth day performance of the rats in Group 1.

Question 9

The rats in Group 2 were demonstrating

- A. latent learning.
- B. insight learning.
- C. classical conditioning.
- D. observational learning.

Question 10

For the experimenter to be able to observe if learning had occurred, it was necessary that the rats

- A. had insight.
- B. were rewarded.
- C. were unrewarded.
- D. became familiar with the maze in the first few trials.

Question 11

Ngor spent an hour trying to assemble a new table he had purchased, but was unable to do so, despite having the correct tools. He decided to take a break for a while and went away to do something else. During this time, he suddenly realised what the solution was. When he returned to the table he found that he was able to put the table together quickly.

Ngor's discovery of a solution to assembling the table is an example of

- A. latent learning.
- B. insight learning.
- C. vicarious learning.
- D. trial-and-error learning.

Question 12

Which of the following groups only describes forms of learning?

- A. fixed action patterns, insight learning, taste aversion
- B. classical conditioning, reflex actions, one-trial learning
- C. operant conditioning, trial-and-error learning, maturation
- D. observational learning, classical conditioning, operant conditioning

Use the following information to answer Questions 13–15.

When Spot was a puppy he was taken to the vet several times to get his injections. Dr Brown gave the injections each time, and each time Spot experienced pain. Since then, each time Spot is taken to the vet and sees Dr Brown, he becomes fearful and trembles.

Question 13

The type of learning experienced by Spot is best described as

- A. classical conditioning.
- B. operant conditioning.
- C. observational learning.
- D. trial-and-error learning.

Question 14

At Spot's first immunisation visit, the sight of Dr Brown was the

- A. operant.
- B. response.
- C. neutral stimulus.
- D. conditioned stimulus.

Question 15

On a recent visit to the vet, Spot was seen by Dr White instead of Dr Brown. Spot did not tremble with fear at the sight of Dr White.

Spot's response to Dr White is an example of

- A. extinction.
- B. one-trial learning.
- C. stimulus generalisation.
- D. stimulus discrimination.

Question 16

The best condition for acquiring a classically conditioned response is when the neutral stimulus is presented approximately

- A. 3 seconds before the conditioned stimulus.
- B. 3 seconds before the unconditioned stimulus.
- C. half a second before the conditioned stimulus.
- D. half a second before the unconditioned stimulus.

Question 17

The steps in the three-phase model of operant conditioning, in order, are

- A. the operant, the stimulus to the operant, the consequence of the operant.
- B. discriminative stimulus, consequence of response to stimulus, response to stimulus.
- C. conditioned stimulus, unconditioned stimulus, consequence of response to stimulus.
- D. discriminative stimulus, response to stimulus, consequence of response to stimulus.

Use the following information to answer Questions 18–20.

To encourage his noisy Grade 3 students to work quietly in class, Mr Soros set up the following system with them.

- Students caught talking during quiet work time would not be allowed to play with basketballs or footballs during the following play time.
- Students who worked quietly would receive a star beside their names on a chart.
- Students who earned ten stars could exchange them for a lolly or chocolate bar of their choice.

Question 18

Not allowing students to play with the basketballs and footballs during the following play time is an example of

- A. punishment.
- B. response cost.
- C. positive reinforcement.
- D. negative reinforcement.

Question 19

Giving the students a star next to their names on the chart for working quietly is an example of

- A. punishment.
- B. response cost.
- C. positive reinforcement.
- D. negative reinforcement.

Question 20

Allowing students to exchange ten stars for a lolly or chocolate bar of their choice is an example of

- A. shaping.
- B. flooding.
- C. a token economy.
- D. fixed interval reinforcement.

Question 21

A key difference between classical and operant conditioning is that in classical conditioning

- A. the learner is passive, while in operant conditioning the learner is active.
- B. stimulus discrimination is common, while in operant conditioning stimulus discrimination is rare.
- C. stimulus generalisation is rare, while in operant conditioning stimulus generalisation is common.
- D. learning is based on a voluntary response, while in operant conditioning learning is based on a reflexive response.

Question 22

Taste aversion is often acquired through

- A. one-trial learning.
- B. operant conditioning.
- C. observational learning.
- D. trial-and-error learning.

Question 23

A cat was accidentally locked in a shed. It tried many ways to get out until it finally managed to open a loose window. When it was accidentally locked in the shed again, it did not take long to get out of the window, and on the third occasion it escaped through the window straight away.

The cat's behaviour demonstrates

- A. latent learning.
- B. one-trial learning.
- C. graduated exposure.
- D. Thorndike's Law of Effect.

Question 24

Research by Garcia and Koelling (1966) on one-trial learning and taste aversion in rats consisted of a preconditioning phase, a conditioning phase and a test phase.

In the preconditioning phase, the rats were given saccharine water

- A. and a mild electric shock when they drank it.
- B. and plain water and could select which they drank.
- C. and radiation treatment at the same time, which made them sick.
- D. which activated a loud noise and a flashing light when they drank it.

Question 25

One criticism of the approach to classifying mental illness adopted by the Diagnostic and Statistical Manual of Mental Disorders (DSM) is that it

- A. involves measuring symptoms along a continuum.
- B. relies on objective physiological measures of wellbeing instead of subjective feelings.
- C. is a dimensional approach to classifying mental disorders and does not use categories to classify mental disorders.
- D. is based on symptoms reported by the person, but the person might not disclose subjective feelings such as anxiety, unhappiness or distress.

Question 26

When a person first experiences a stressor

- A. acetylcholine is released.
- B. adrenaline and noradrenaline are released.
- C. the parasympathetic nervous system increases the person's heart rate.
- D. the sympathetic nervous system causes the person's pupils to constrict.

Question 27

In the resistance stage of the General Adaptation Syndrome, the body's resistance to stress

- A. drops below normal level.
- B. continues to rise above normal level.
- C. rises above normal level then drops below normal.
- D. drops below normal level then rises above normal.

Question 28

One of the major criticisms of the General Adaptation Syndrome is that

- A. Selye did not consider that a rat's response to stressors is less varied than a person's stress response.
- B. Selye did not consider the impact of physiological stressors on humans, he only considered psychological stressors.
- C. it does not provide an explanation of why the body's level of resistance to stress decreases during the exhaustion stage.
- D. Selye claimed that during counter shock, the body's level of resistance to stress decreases when in actual fact it increases.

Use the following information to answer Questions 29–33.

Sue was very excited when she received her VCE results because they were good enough to allow her to do the course she had always wanted to do. She spent the summer holidays feeling very excited about starting university; she chose all her subjects and planned her timetable. However, when she started at university, she found it much harder than she had expected. In addition to attending classes, there were many assignments and lots of reading. She also had to work part time to earn some money to support herself. Halfway through the semester, she developed a persistent cold and had difficulty sleeping because she was worried she would not pass her subjects.

Question 29

During the summer holidays, she experienced

- A. distress.
- B. eustress.
- C. allostasis.
- D. General Adaptation Syndrome.

Question 30

According to Selye's General Adaptation Syndrome, when Sue is unable to overcome her head cold she is likely to be in the stage of

- A. shock.
- B. exhaustion.
- C. counter shock.
- D. alarm reaction.

Question 31

Trying to balance her many assignments with her part-time job made her stress response worse.

Her many assignments are

- A. a social factor.
- B. a cultural factor.
- C. a biological factor.
- D. an environmental factor.

Question 32

Sue decided to talk to her older sister and seek advice about how to balance her time between all of her commitments.

Seeking advice from her sister is an example of

- A. eustress.
- B. allostasis.
- C. social support.
- D. cultural support.

Question 33

Sue also decided to seek help from a counsellor. The counsellor suggested that meditation would be a useful technique for Sue to use to help manage her stress.

The use of meditation helps to alleviate Sue's stress by

- A. increasing her allostatic load.
- B. activating her sympathetic nervous system.
- C. increasing the amount of cortisol in her bloodstream.
- D. reducing her level of physiological and psychological arousal.

Use the following information to answer Questions 34–39.

Shane has an intense and irrational fear of snakes. Shane experiences fear even when he is exposed to a harmless image of a snake in a book or on television. His heart beats faster, he feels sweaty, his mouth feels dry and he leaves the room. To overcome his fear of snakes, Shane seeks the advice of a clinical psychologist.

Question 34

Shane's reaction to the image of the snake is called the

- A. fight-flight response.
- B. flee-confront response.
- C. simple phobia response.
- D. sympathetic arousal response.

Question 35

The response identified in Question 34 is activated by the

- A. somatic nervous system.
- B. automatic nervous system.
- C. sympathetic nervous system.
- D. parasympathetic nervous system.

Question 36

Shane's heart beating faster is an example of

- A. an allostatic factor.
- B. an environmental factor.
- C. a physiological response.
- D. a psychological response.

Question 37

To help Shane overcome his fear, the psychologist could teach Shane to change the way he thinks about snakes – that, for instance, snakes are unlikely to attack him.

The psychologist is most likely suggesting

- A. extinction.
- B. aversion therapy.
- C. graduated exposure.
- D. cognitive behavioural therapy.

Question 38

The psychologist could also expose Shane to snakes at the snake exhibit at the zoo. Shane would have to stay in the enclosure and watch the snakes for a long period of time (rather than run away). The aim would be to replace Shane's fear response with a learned relaxation response.

This approach is known as

- A. flooding.
- B. aversion therapy.
- C. systematic desensitisation.
- D. cognitive behavioural therapy.

Question 39

For the treatment in Question 38 to be successful, Shane would need to stay in the enclosure with the snakes until

- A. the snakes become active and are moving.
- B. the conditioned response is extinguished.
- C. the conditioned stimulus is no longer present.
- D. there are at least eight pairings of the unconditioned stimulus and the conditioned stimulus.

Use the following information to answer Questions 40 and 41.

After her grandmother died unexpectedly, Sarah felt very sad and for several weeks found it very difficult to concentrate at school. In contrast, when her grandfather passed away after a long battle with cancer, Sarah was sad but relieved that he was no longer suffering. She found that she could concentrate at school and cope with everyday life.

Question 40

According to Lazarus and Folkman's Transactional Model of Stress and Coping, the type of stress that Sarah experienced when her grandmother died is

- A. harm.
- B. threat.
- C. eustress.
- D. challenge.

Question 41

The above scenario supports the idea that a stressful experience is

- A. never desirable.
- B. subjective in nature.
- C. caused only by external events.
- D. accurately measured by self-report.

Use the following information to answer Questions 42–44.

Britt has a part-time job working in a pizza shop. She finds working in the pizza shop stressful as she has to stand for long periods of time and is in a high pressure environment. Recently Britt's mother lost her job, so Britt has increased the number of hours she is working at the pizza shop to help her mother pay the rent and bills.

Question 42

When Britt increased the number of hours she was working at the pizza shop, it could be expected that

- A. Britt's allostatic load would increase.
- B. Britt would be less susceptible to colds and other viruses.
- C. the level of cortisol in Britt's bloodstream would decrease.
- D. the level of adrenaline in Britt's bloodstream would decrease.

Question 43

When Britt's mother lost her job, she felt ashamed that her daughter had to work more hours to help her pay the rent and bills.

According to Lazarus and Folkman's Transactional Model of Stress and Coping, Britt's mother feeling ashamed is an example of

- A. eustress.
- B. social stress.
- C. primary appraisal.
- D. secondary appraisal.

Question 44

Britt's mother decided to investigate what courses she could undertake to increase her skills and the likelihood of obtaining another job.

Investigating available courses is an example of

- A. distress.
- B. eustress.
- C. primary appraisal.
- D. secondary appraisal.

Question 45

Using the Diagnostic and Statistical Manual of Mental Disorders (DSM) to label and classify mental illness and disorders can be problematic because

- A. many psychologists disagree on how to treat them.
- B. the sufferers may believe they will never get better.
- C. different professionals use different languages to describe symptoms.
- D. psychiatric labelling can lead to prejudice and discrimination for the sufferer.

END OF SECTION A

NO WRITING ALLOWED IN THIS AREA

SECTION B – Short answer questions**Instructions for Section B**

Answer **all** questions in the spaces provided. Write using black or blue pen.

Question 1

Describe **two** features of adaptive plasticity.

2 marks

Question 2

Describe **one** advantage of using a dimensional approach to classify mental disorders compared with using a categorical approach.

2 marks

SECTION B – continued
TURN OVER

NO WRITING ALLOWED IN THIS AREA

Question 3

Stella is 17 years old and undertaking her VCE. Stella is feeling overwhelmed by what Year 12 involves and has had difficulty sleeping during the school term. Her friend Audrey, however, is enjoying Year 12 and is finding the SACs challenging but manageable.

- a. In terms of primary appraisal in Lazarus and Folkman's Transactional Model of Stress and Coping, explain why Stella and Audrey have evaluated their situations differently.

4 marks

- b. Explain how biofeedback could help Stella to reduce her level of stress.

3 marks

NO WRITING ALLOWED IN THIS AREA

Question 4

Mikaela is 9 years old. She is very scared of spiders and feels anxious every time she sees a spider.

- a. Outline the role of gamma-aminobutyric acid (GABA) in the medical management of Mikaela's simple phobia of spiders.

2 marks

- b. State **one** socio-cultural factor that may have contributed to Mikaela developing a phobia of spiders.

1 mark

Question 5

With reference to the three-phase model of operant conditioning, explain how a parent may reduce the frequency of a child's tantrums.

3 marks

Question 6

John's mother says that each time his bedroom is tidy at the end of the week, he will receive an extra dollar in his weekend spending money.

- a. i. What schedule of reinforcement is John's mother using to encourage him to keep his room tidy?

- ii. Based on this schedule, when is John's room likely to be most tidy? Explain your answer.

1 + 2 = 3 marks

- b. Which reinforcement schedule could John's mother use to encourage him to keep his room tidy all week? Explain why this schedule should result in more consistent tidiness.

2 marks

NO WRITING ALLOWED IN THIS AREA

Question 7

Short-tailed shearwater birds hatch in burrows on the coast of southeast Australia. In late April each year, the adult birds leave the baby birds and make their annual migration flight to the northern hemisphere. Approximately two weeks later, the young birds leave their burrows and make their first migration flight to the northern hemisphere.

With reference to this scenario, identify **one** behaviour which is **not** dependent on learning and justify your answer.

2 marks

Question 8

Name an imaging technology which would enable a researcher to identify localised changes in the brain while learning a specific task.

1 mark

Question 9

a. What is a biopsychosocial framework?

2 marks

b. Explain how biopsychosocial frameworks have changed the way health professionals consider health and wellbeing.

2 marks

Answer **one** of the following questions. Tick the box next to the question you are answering.

- ☐ Question 10 (Mood disorder: major depression) **or**
- ☐ Question 11 (Addictive disorder: gambling) **or**
- ☐ Question 12 (Psychotic disorder: schizophrenia)

Question 10 – Mood disorder: major depression

Janet was given her dog, Fluffy, as a present when she was 12 years old. When Janet was 24, Fluffy died. Janet felt very sad, and took a day off work because she was so upset. However, the next day she felt much better and after a week, Janet found she was able to consider getting a new dog.

- a.** Give **two** reasons why a doctor may conclude Janet **is not** suffering from major depression.

2 marks

- b.** Explain why selective serotonin re-uptake inhibitors (SSRIs) can be effective in the medical treatment of depression.

2 marks

- c.** Give one strength **and** one limitation of cognitive behavioural therapy (CBT) as the sole treatment for major depression.

Strength _____

Limitation _____

2 marks

OR

SECTION B – continued

NO WRITING ALLOWED IN THIS AREA

Question 11 – Addictive disorder: gambling

Joe enjoys playing poker machines and spends most Friday nights doing this. He spends \$50 a week on the poker machines. Joe attends work and social activities with his family and friends. Joe's wife claims he is addicted to the poker machines, but the mental health professional Joe consults does not agree.

- a. Give **two** reasons why a mental health professional may conclude Joe **is not** addicted to gambling.

2 marks

- b. Describe the role of dopamine in the medical treatment of a gambling addiction.

2 marks

- c. In terms of schedules of reinforcement, explain why the gambling behaviour of an addicted gambler is highly resistant to extinction.

2 marks

OR

Question 12 – Psychotic disorder: schizophrenia

Sam, a 65-year-old man, woke up one morning and could not remember who he was. When his wife took him to the doctor, he was able to speak rationally about the fact that he could not remember anything from his past. He asked the doctor if he could be suffering from schizophrenia. The doctor thought it was unlikely that Sam was schizophrenic.

- a. Give **two** reasons why the doctor may have concluded that Sam **is not** schizophrenic.

2 marks

- b. Explain why antipsychotic drugs may be effective in the medical treatment of schizophrenia in some individuals.

2 marks

- c. Explain a difference between cognitive behavioural therapy (CBT) and cognitive remediation in the treatment of schizophrenia.

2 marks

END OF SECTION B**NO WRITING ALLOWED IN THIS AREA**

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TURN OVER

SECTION C – Extended answer question

Instructions for Section C

Answer the question in the space provided. Write using black or blue pen.
Your response may include diagrams, charts and tables.

Judy, an educational psychologist, was interested in studying the effects of positive reinforcement on students’ mathematics performance at school. Judy works at Mountain Hills Secondary College, a coeducational secondary school. There are 100 Year 8 students at the school: 60 females and 40 males. The Year 8 students are aged between 12.5 and 14.5 years old. Judy selected two of the Year 8 mathematics classes (Class A and Class B) to participate in the study. Class A contained 20 students: 12 females and 8 males. Class B contained 23 students: 14 females and 9 males. Informed consent was obtained from the students.

Prior to the experiment, each participant sat a numeracy test of 40 questions (Numeracy Test 1) administered by their mathematics teacher. The teachers then gave the results of the test to Judy.

The teacher of Class A was instructed to continue teaching the students mathematics as she normally would. The teacher of Class B was instructed to provide students with praise whenever they got a question right. These students were also given stickers when they completed a worksheet and were rewarded with 15 minutes of free time for every five worksheets they completed.

At the end of four weeks, the mathematics teachers administered a second numeracy test of 40 questions (Numeracy Test 2) and sent the participants’ results to Judy.

The difference in the mean number of the number of questions that were correct was calculated. The results are presented in the table below.

Table 1. Mean number of correct responses on Numeracy Test 1 and Numeracy Test 2

	Mean number of questions correct on Test 1	Mean number of questions correct on Test 2	Difference in mean number of questions correct between Test 1 and Test 2
Class A	29.8	30.8	1
Class B	30.6	35.2	4.6

The level of significance was set at 0.05. A test of significance was conducted and $p < 0.05$.

You are required to write two parts of a psychological report on this research.

- i. Introduction:** Write the final section of the Introduction which should contain the variables to be studied, the way they are operationalised and a statement of the hypothesis (or hypotheses) that was being tested.
- ii. Discussion:** Write the initial section of the Discussion which should contain the conclusion(s) based on the hypothesis (or hypotheses) and a statement of the implications of the conclusion(s). Weaknesses of this experimental design and procedures to eliminate these should be described.

NO WRITING ALLOWED IN THIS AREA

NO WRITING ALLOWED IN THIS AREA

SECTION C – continued
TURN OVER

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END OF QUESTION AND ANSWER BOOK

Clearly number all responses in this space.

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A script book is available from the supervisor if you need extra paper to complete your answer. Please ensure you write your **student number** in the space provided on the front cover of the script book. **At the end of the examination, place the script book inside the front cover of this question and answer book.**